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**Managing and Improving Interdepartmental Communications in Dell**

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# Managing and Improving Interdepartmental Communications in Dell

by

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**Managing and Improving Interdepartmental Communications in Dell**

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Dell Inc. has a long and storied history that started in a dorm room and through many highs, and some lows, became a $60 billion international powerhouse. Now that the U.S. PC market is so saturated it becomes increasingly important to build long term customer relationships. While Dell transforms itself into an end-to-end solutions provider that will deliver hardware and state of the art services and software it needs to also create a new way to cultivate relationships on the consumer level. Some of these customer relationships have been somewhat damaged due to the extremely rapid growth of the company, its departments, and the amount of customers served. Corporations around the world have been using the same departmental model that has made it easy to manage a company but difficult for a customer to navigate it. This report will analyze the problem with the current departmental model and suggest an alternative that is cost effective and customer centric.

## Table Of Contents

## Chapter 1: A Brief History

Dell Inc. was born in 1984 in Hobe Hall at the University of Texas Austin. Michael Dell, then a pre-med student at the age of 19, founded PCs Limited with a capital of a $1,000 ("Company Heritage"). Michael Dell had the vision that by selling directly to consumers, PCs Limited would understand consumer's needs better and deliver a product that was distinctly made for their computing demands and, at the same time, undercut his competitors' prices. Until 1985 PCs Limited produced computers that were "IBM PC compatible" which are very similar to the earlier IBM PC, XT, and AT (International Directory of Company Histories, 2004).

These "IBM PC compatible" computers replicated the elements and architecture of the IBM PC, but in 1985 PCs Limited introduced its first computer designed in house. This computer was called the "Turbo PC" and came stocked with an 8 MHz processor, 10MB of hard drive space, and a 5.25 inch floppy drive ("Company Heritage"). The "Turbo PC" was sold for around $795 (Edwards, 2007).

In 1988 the company changed its name to "Dell Computer Corporation" and went public, raising $30 million on a valuation of about $85 million ("Dell Press Releases"). The initial public offering of 3.5 million shares at $8.50 took place on June 22nd 1988. The public offering increased the company's market capitalization from its paltry $1,000 in 1984 to $85 million just a few years later.

In its first year of trading Dell Computer Corporation grossed more than $73 million ("Creation of Dell Computer Corporation by Michael Dell"). During this time Dell's competitors bled money into retail stores in order to distribute their products while Dell kept its model lean, taking orders directly from consumers over the phone and through mail order catalogs.

**International Expansion**

Dell began expanding globally when it opened its first international subsidiary in London in 1987 (“Company Heritage”). By 1990 Dell established subsidiaries in Italy and France and a manufacturing plant in Limerick, Ireland, to supply customers in Europe, the Middle East, and Africa (International Directory of Company Histories, 2004).

Throughout 1991 international expansion continued at a lightening pace with subsidiaries being established in Norway, Spain, Finland, Belgium, and Luxembourg. A customer service/care center was opened in the Netherlands, sales forces were launched in Ireland and Belgium, and an on-site service program was launched in Mexico (“Dell Computer Corp. - Intense Growth”). In 1991 international sales had more than doubled for the third consecutive year (“Company Heritage”). By 1993 a whopping 36% of Dell’s sales were from abroad and that same year Dell established a subsidiary in Australia and Japan marking their entry into the Asia-Pacific region (International Directory of Company Histories, 2004).

Dell opened a new manufacturing, sales, and support facility in Xiamen, China in 1998 and in the same year also announced new manufacturing sites in Ireland, Brazil, and the United States (“Company Heritage”). Fast forwarding to 2004 Dell became China’s third largest provider of PCs and services with shipment growth at 60%, much faster than the industry standard. This growth was significant since China was seen as one of the largest growing markets and posed a new opportunity and a growing market for the company.

**Growth of Dell and the Evolution of the PC**

Dell's first "notebook", the *316LT*, hit the market in 1989. The *316LT* came equipped with a 16MHz CPU, 20 MB hard drive, 1MB of RAM, and a 3 1/2 inch floppy drive. The system weighed in at 13 ½ pounds without the battery and was priced at $3,400 which was $1,500-$2,000 below its competition (Info World, Volume 12, Issue 21, page 64). The laptop came with a 1 year on-site warranty which included a toll free telephone number for unlimited technical support calls. The laptop also had a 30-day money back guarantee and its "serviceability" was rated as "excellent" by Info World, a tech magazine (Info World, Volume 12, Issue 21, page 64).

Along with its price advantage Dell also had a customer satisfaction advantage as well. Dell invested extensive resources in training its staff. Future Dell phone operators underwent an intensive 6 week training program before they were allowed on the phones. Customer grievances were reviewed in weekly staff meetings and in 1990 J.D. Powers and associate ranked Dell number 1 in customer satisfaction, it's first customer satisfaction survey among PC makers (Info World, Volume 13, Issue 38, page 30). By 1992, Dell Computer Corporation had grown significantly and was listed in Fortune Magazines "500 largest companies", which made Mr. Dell, then 27, the youngest ever CEO of a Fortune 500 company ("Company Heritage").

In the beginning of the 1990's Dell Computer Corporation had experimented with selling its computers through retailers like warehouse clubs and computer stores. In 1993 sales were soaring and growing at an annual rate of 40%, making Dell one of the world's top 5 PC makers. However, in 1993 Dell Computer Corporation posted its first operating loss (International Directory of Company Histories, 2004). Due to its lack of success in the retail channels Dell abandoned its foray into retail stores in and reinvigorated its direct to consumer

model and continued to grow, posting revenues of $2 billion by the end of 1993 (Dell Computer Corp. – Intense Growth).

Dell's success in the consumer PC business allowed it to diversify its revenue streams by introducing business line computers, servers, and storage systems. In 1993 the *Dimension* and *Optiplex* desktops were unveiled for consumers and business customers ("Company Heritage"). The Dell *PowerEdge* server line was introduced in 1994 ("Company Heritage"). Dell stayed with its direct to consumer model even with servers, thus eliminating the cost of other channel partners and allowing them to undercut their competitor's prices.

The launch of the *PowerEdge* server would become symbolic in Dell's transformation from a computer manufacturer to an end-to-end solutions provider. Today Dell offers more than 20 *PowerEdge* servers that come in tower, rackmount, and blade form factors. In 1994 Dell also launched a business line laptop called the *Latitude XP*. The *Latitude XP* also marked the launch of the words first Lithium-ion battery in a computer which broke every industry record for battery life ("Company Heritage"). Dell introduced their *Precision* line of workstations in 1997, which also targeted business customers who needed high performance and graphics capabilities ("Company Heritage"). Continuing with their diversification, Dell created the *PowerVault* series, a line of storage products, for data center management in 1998. In 2001 Dell launched the *PowerConnect* line of network switches that make them a player in the networking equipment market ("Company Heritage").

**The Internet Age and Further Diversification**

The launch of Dell.com in 1996 might represent the most historic moment in Dell's storied history. The site was a huge hit and only fueled the direct to consumer model's success.

Within 6 months the site was generating more than $1 million a day in sales and by 1997 Dell had shipped more than 10 million PCs worldwide (“Company Heritage”). The introduction of the website also ballooned profits which reached $944 million in 1998, a stark contrast to the $36 million loss in 1994 (International Directory of Company Histories). Dell.com zoomed the company to historic heights and by the end of 1999 it ranked #1 in PCs in the U.S., #1 worldwide in PCs for large and medium businesses and #1 worldwide in workstation shipments (“Company Heritage”).

The new millennia marked new highs and lows for the largest PC maker in the world. In 2000, only 4 years after the launch of Dell.com, internet sales through the website reached $40 million a day making the site one of the highest volume ecommerce sites in the world (“Company Heritage”). By 2001 the company was shipping the most PCs, making it the #1 computer provider in the world, and the #1 Intel-based server provider in the world as well (“Company Heritage”). Dell continued to diversify launching the *PowerEdge 1655MC*, Dell’s first blade server, the *1300MP projector*, consumer and business Dell branded printers, Dell LCD flat-panel TVs, digital music players, and an online music service (International Directory of Company Histories, 2004). Through this diversification net income swelled by 25% in 2004 to $2.65 billion and revenue increased by 17% to $41.44 billion (International Directory of Company Histories, 2004).

**A Brief Respite**

Shortly after releasing these impressive results Michael Dell revealed he would be stepping down as CEO and Kevin B. Rollins, then the COO, would be taking over. Although Michael Dell would stay on as chairman, Kevin Rollins would be in control and essentially map

the future of Dell. Rollins did have a few years of success before he was pushed out in early January 2007 because of lackluster performance that included 5 quarters of earnings below Wall Street expectations. Michael Dell once again became CEO and continued the transformation of the company from a PC manufacturer to an end to end solutions provider. Dell would go on an acquisition spree that would diversify its revenue streams and bring it closer to becoming a one-stop shop for hardware, software, and IT services. These acquisitions included Perot Systems in 2009 ("Financial News"), InSite One in 2010 ("Acquisitions, 2010"), Clerity Solutions, Make Technologies, Wyse Technology, and Credent Technologies all in 2012 ("Acquisitions, 2012"). There were many more that enhanced Dell's end to end solutions capabilities and added value to their transformation.

**US Market Saturation and Customer Satisfaction**

It wasn't all good news for Dell in the new millennia though. As the early 2000's faded, the PC market in the US started to become more and more saturated causing price wars and margin declines. The PC was becoming a commodity as the product reached the maturity stage of the product life cycle. Another issue that Dell faced was the decline in customer satisfaction levels for tech support and care starting in 2001. Most customers and analysts blamed this lack of satisfaction on the outsourcing of care and tech to India, but there were many more variables at play that led to the decline. By 2002 Dell's American Customer Satisfaction Index score had dropped by 5% to a rating of 76 which still led the PC industry (7% above the industry average and 4% above Apple, the closest competitor) but was on a steady decline (American Customer Satisfaction Index).

The precipitous growth of the company created large departments that had trouble communicating and integrating themselves as one functional unit. This type of problem is nothing new to the PC industry or large corporations in general and being the #1 PC manufacturer in the world will put stress and pressure on even the most sophisticated care and tech support centers. Dell was able to rebound in 2006 with its American Customer Satisfaction Index score rising by 5% from the previous year to 78 but it was still in the middle of the pack of other PC manufacturers who averaged a score of 77 (American Customer Satisfaction Index). This is in stark contrast to its ratings in the 1990's, which were in the 80s and even as early as 2000 in which year they scored an 80, the highest score in the industry.

By 2008 Apple's ACSI score had skyrocketed to 85 which led the industry by a considerable margin. This score was 13% higher than Dell, who was in second place at 72 (American Customer Satisfaction Index). Throughout the next 5 years Dell's score wouldn't change much staying between 72-77, which mirrored the industry average at the time.

**Chapter 2: Big Companies and the rule of 150**

Large companies, with large departments, tend to have problems with interdepartmental communications that lead to lower customer satisfaction ratings. Business Insider recently ranked "The 15 Worst Companies for Customer Service" with Bank of America coming in at #15, Delta Airlines at #13, Cox Communications #9, and Time Warner Cable at #7 (Business Insider). In a separate ranking MSN Money ranked companies in the "2012 Customer Service Hall of Shame" with Capital One coming in at #10, Sprint at #6, Dish Network at #5, and Bank of America at #1 (MSN Money). Given that these surveys do tend to focus on large companies there is no shortage of horror stories from customers who are shocked and appalled with their experiences. So why does this happen?

Channel capacity is a concept in cognitive psychology that theorizes that "the span of absolute judgment and the span of immediate memory impose severe limitations on the amount of information that we are able to receive, process, and remember" (Miller, 1956). This concept basically explains that our brains can only process and store so much information. It is not an infinite bank that you can continually fill up. If it is filled up and some other information needs to be added then you must remove something else. In his book *Tipping Point*, Malcolm Gladwell, makes a case that humans also have a social channel capacity. Social channel capacity imagines human being's ability to interact and know one another to be finite just like their ability to process and store information. He advocates that this social channel capacity developed in human beings during the course of human evolution. In order to support his idea he quotes the evolutionary biologist S.L. Washburn: "Most of human evolution took place before the advent of agriculture when men lived in small groups, on a face-to-face basis. As a

result human biology has evolved as an adaptive mechanism to conditions that have largely ceased to exist. Man evolved to feel strongly about few people, short distances, and relatively brief intervals of time; and these are still the dimensions of life that are important to him." (Gladwell, 2000. p. 177)

The idea of social channel capacity is not a new concept. Robin Dunbar, a British anthropologist and evolutionary psychologist, first espoused on it with his "rule of 150". Robin Dunbar started his work by studying primates, which are monkeys, chimpanzees, baboons, and humans. He observed that primates have the largest brains of all mammals and that the neocortex, which is in charge of complex thought and reasoning is massive by regular mammal standards (Gladwell, 2000). Before Dunbar had come along scientists had theorized why the neocortex in primates is so much larger than in other mammals. What Dunbar discovered was that the size of the brain directly correlated with the size of the groups that the primates were living in. More precisely, the larger the neocortex is in the primate, the larger their group size (Gladwell, 2000). His argument is that "brains evolve, they get bigger, in order to handle the complexities of larger social groups" (Gladwell, 2000, p.178). Dunbar quotes as an example that, if you belong to a group of 5 people, then you would have to keep track of 10 separate relationships. That is, first your relationship with the other 4 people and the 6 other two way relationships between the others (Gladwell, 2000, p.178). As mammals, group function and group dynamics are extraordinarily important to our survival. Dunbar goes on to explain that humans socialize in the largest groups because we are the only primate with a large enough neocortex to handle the intricacies of such large social arrangements (Gladwell, 2000). Dunbar went even further to say he could predict the size of group a primate lives in solely based on

the ratio size between their neocortex and their brain. His equation is startlingly accurate with the majority of primates. When you use his equation and stick in the ratio size of a human's neocortex to their brain you get a group estimate of 147.8 (Gladwell, 2000). Dunbar states that, "The figure of 150 seems to represent the maximum number of individuals with whom we can have a genuinely social relationship, the kind of relationship that goes with knowing who they are and how they relate to us. Putting it another way, it's the number of people you would not feel embarrassed about joining uninvited for a drink if you happened to bump into them in a bar." (Gladwell, 2000, p.179).

Dunbar supported his theory on the "rule of 150" through several different observations. He examined 21 different hunter/gatherer societies which included the Walbiri of Australia, to the Tauade of New Guinea, to the Ammassalik of Greenland, to the Ona of Tierra del Fuego and discovered that the average number of people in their villages was 148.4 (Gladwell, 2000). He also examined military organizational structures and found that the rule of 150 can be found pervasively in the military. He explains, "Over the years military planners have arrived at a rule of thumb which dictates that functional fighting units cannot be substantially larger than 200 men." He goes on to expound on the need for units to be this size because, "At this size, orders can be implemented and unruly behavior controlled on the basis of personal loyalties and direct man-to-man contacts. With larger groups, this becomes impossible." (Gladwell, 2000). Gladwell also substantiates the "rule of 150" through his observations of the Hutterites, a religious group who "have lived in self-sufficient agricultural colonies in Europe and, since the early twentieth century, in North America." (Gladwell, 2000, p.180-181) This religious group has a strict policy that once a colony approaches 150 people they branch off and

start another colony. Gladwell had a chance to speak with one of the leaders of the Hutterites, Bill Gross. Gross states that "Keeping things under 150 just seems to be the best and most efficient way to manage a group of people." (Gladwell, 2000, p.181) He also claims that, "When things get larger than that, people become strangers to one another….In smaller groups people are a lot closer. They're knit together, which is very important if you want to be effective and successful at community life." (Gladwell, 2000, p. 181)

Gladwell also examines a corporation, Gore Associates, who implemented the "rule of 150" into their organizational structure. Gore Associates is an American manufacturing company based out of Newark, Delaware that was co-founded by Bill and his wife, Vieve Gore in 1958 ("Our History"). Bill and Vieve started the business from the basement of their home and built it into a multibillion corporation. The corporation specializes in high tech products like waterproof, breathable Gore-Tex fabrics, cables for electrical signal transmission, and medical implants. Gore boasts of "More than 35 million innovative Gore Medical Devices have been implanted, saving and improving the quality of lives worldwide" ("Our History"). Gore currently has thousands of employees yet not one of their "plants" has more than 150 employees in them. Bill was once quoted as saying, "We found again and again that things get clumsy at a hundred and fifty" (Gladwell, 2000). The interesting part of these "plants" is that they are all self-sufficient and each operating autonomously and separately from the other. So every part of the process from designing and producing to marketing and selling a product was done in one, 150 man building. So if those selling the product had a problem with marketing, they already had a personal relationship with the marketing people. In his book, Gladwell quotes Buckley, an employee of Gore, explaining how he had just returned from Lucent Technologies

in New Jersey, a plant where they make the cells that operate cell phones, pods that carry cell signals, and other electrical components. Buckley enlightens us to why the rule of 150 is important in business: “They have six hundred and fifty people. At best their manufacturing people know some of their design people. But that’s it. They don’t know any of the salespeople. They don’t know the sales-support people. They don’t know the R and D people. They don’t know any of these people, nor do they know what is going on in those other aspects of the business. The pressure I’m talking about is the kind you get when salespeople are in the same world as the manufacturing people, and the salesperson who wants to get a customer order taken care of can go directly and talk to someone they know on the manufacturing team and say, I need that order. Here’s two people. One is trying to make the product, one is trying to get the product out. They go head to head and talk about it. That’s peer pressure. You don’t see that at Lucent (Gladwell, 2000, p. 187).

When a company divides its departments into sales, marketing, manufacturing, etc. they tend to segregate themselves and not communicate effectively. This is especially prevalent in large corporations where each of these departments easily goes over 150 people. Then add in the problem of a few thousand miles separating the departments when you factor in outsourcing. Each of these departments plays a part in the customer’s journey through the buying process. When they do not function as one unit then the journey can turn into an unsatisfactory experience.

It is important to note that although Gladwell is well respected as an author and Dunbar is well respected as an anthropologist and evolutionary psychologist, the “rule of 150” as a maximum unit for efficiency is still hotly debated among researchers and scientists. The “rule of

150” as a maximum unit for efficiency has not been concretely proven but the relationship between neocortex size and group size has been widely studied and the consensus is that neocortex size has a determining factor on group size. Although Dunbar does co-author the majority of research found on the “rule of 150”, his research has stood up to scientific scrutiny. In his research with Leslie C. Aiello, they conclude, “All of these values lie within the 95% confidence limits for group size predicted for modern humans by relative neocortex size” (Aiello and Dunbar, 1993). So if human’s neocortex has only the capacity to handle a finite amount of relationships it can be deduced that going over that finite number will degrade communications between the groups. So taking into account the success that Gore associates has enjoyed by following “the rule of 150” in their departmental planning it is reasonable to conclude that smaller group sizes in departments will improve communications.

**Chapter 3: Digital Teams**

Before suggesting a solution to this problem of interdepartmental communications it's important to understand the current environment in which the PC industry operates. The PC itself is in the mature/declining stage of the product life cycle with numerous competitors including HP, Lenovo, Toshiba, Asus, Acer to Vizio, Samsung, and countless other small unknown manufacturers. The products are undifferentiated and all (except Samsung and Apple) are running on windows based operating systems with the only USP being the service the companies provide. Presently, the customer service that the majority of large companies provide whether it's PC manufacturers, large retailers, or communication companies is very poor. The same departmental model has been used for decades with only small changes here and there and no real new innovation to its core functioning. On the PC side the reasoning was that fat profits never elicited a change in the status quo and when competition brought lower prices and margins started to shrink, outsourcing was the solution. Although this is an over-simplistic and over-generalized synopsis of the PC industry over the last two decades it does provide us with a landscape to assess its situation.

After briefly analyzing the PC market in its current environment it becomes obvious that the service the customer receives before, during, and after the point of sale becomes critical to differentiating the brand in a crowded and saturated market. The service that a customer receives before, during, and after the point of sale is dependent upon the manufacturing, marketing, sales, care, and tech departments. The smooth inter-functioning of these departments is essential to a good customer experience.

In an ideal environment all employees would be concentrated under one roof and integrated into one functioning 150 person unit. The necessity for outsourcing in an industry where razor thin profits are the norm and not the exception make this impossible. We will first examine just the consumer department then incorporate and bring in the others.

First we need to observe all the customer touch points, both direct and indirect within Dell. The sales, customer care, and tech guys are the first to come to mind because of their direct interaction with the customer, but other employees with indirect contact like the marketing and manufacturing teams are important to note as well. Then you also have the finance staff from Dell Financial Services and the fraud team as well to incorporate into improved customer service. Lastly, you have the telephone operators taking the customer's calls who perform a crucial function and will benefit from further examination here. The operator's main function is to make it easier for the customer to receive assistance by transferring them to the right department effectively and quickly. Yet their training and effectiveness has come into question. They are the one of the first touch points for a customer yet they have little to no power to solve problems. The frontline customer touch points should always have the most "power" to solve a customer's problem. In this model we propose that operators are in fact more knowledgeable and replaced by "sales support" agents who can process sales, set up returns, answer questions, check order status, and many other common after the point of sale customer requests. This "sales support" agent could also do up to a $100 concession thus giving them enough "power" to solve the majority of customer problems without needing to transfer the call.

The teams would consist of 50 “agents” and each “agent” would be part of 2-3 of these teams. Keeping in mind the rule of 150; we don’t want the groups that an agent is part of to add up to more than 150 people. Depending on the proportion of sales, tech, care, finance, fraud, marketing, and manufacturing people in the consumer department is what proportion of the 50 agent team they would make up. The reason there’s multiple groups is because interaction between the groups is key to the functioning of this model. The customer should only be 1 degree of separation away from speaking with the person they need to provide a solution. So in theory the customer journey should be a lot smoother because of fewer transfers. For instance consider a theoretical example of Matt who is currently on a sales team in consumer home sales. He would stay with his current team but would also have 3 “digital teams” consisting of a total of 50 people each. Of those 50 agents there would be about 5 sales agents from Matt’s team, 5 “sales support” agents, 10 care agents, 10 tech agents, 5 manufacturing agents/supervisors, 5 marketing agents, 5 finance agents, and 5 fraud agents.

The second team Matt would be part of would be another 50 person group, comprised the same way as the first but with different people. This means that Matt should have direct contact with 10 “sales support agents”, 20 care agents, 20 tech agents, 10 manufacturing agents/supervisors, 10 marketing agents, 10 finance agents, and 10 fraud agents. The last 50 agent team that Matt is a part of is comprised of sales agents from different orgs. This would allow a sales agents who gets a sales call that needs to go to a different department (happens frequently) transfer the customer to a “teammate” instead of dropping them back into a different que where they have to go through LVR again. The amount of care, tech, sales, etc. agents per teams depends on how closely the departments need to interact with each other.

This model allows for the integration of the different departments so that the people from the sales department know the people from the tech department and they know the people from the care department and so on. The teams would work together and meet once or twice a week to go over trends/problems/solutions that they are seeing in their departments. The meetings of course would be digital as the teams are in different parts of the world. These digital meetings would be via webcams from existing laptops or through a desktop issued webcam and be facilitated by a manager(s). Using existing infrastructure agents should be able to see when their other teammates are on a call, break, lunch, or available. Thus when a sales agent receives a call that should have been routed to another department they can reach out to their group to see who is available to take the call. This would bring a personal level of accountability between the departments that is not present in the old model.

In large companies you hear a lot of customer's complaining that they've been transferred X amount of times and that they're not getting anywhere. What happens is that the agent that receives the call identifies the customer as needing to be in a different department and transfers to the different department. The agent has no accountability whether they've transferred to the right department or if the issue has been resolved. Now with the new model the agent will be able to contact the person they are transferring to and ensure that they will be able to assist. All calls that are transferred will be able to be identified where they came from and where they went to. Also if an agent keeps transferring to the wrong people they will be held accountable by those agents. This type of collaboration and team work between departments and the accountability between departments is what's missing in the current model.

Now the amount of teams and the amount of agents per team can be manipulated to fit any size organization needed as long as each rep doesn't have more than 150 people on their teams. The model is scalable to small and large companies and should provide a blueprint of how to integrate many departments into one functioning efficient unit that is focused around the customer.

Although Dell has risen to historic heights, becoming the #1 PC manufacturer in the world, and has taken important steps to transform into an end to end solutions provider, there's always more room for innovation and growth. This new model outlines how to integrate large department into functioning, corroborating teams that would not only improve customer experience but also increase efficiency within the departments. Customer experience is key in a saturated PC market in the US. The first company to take this step and re-align their departments along interdepartmental teams will reap the benefits of first-class service and customer experience. Although other companies would soon follow suite in copying the model it is long overdue in a world where we expect bad customer service over the phone.

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